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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/835,623	04/17/2001	Hidetoshi Iwashita	826.1725	7538

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EXAMINER

NAHAR, QAMRUN

ART UNIT PAPER NUMBER

2124

6

DATE MAILED: 04/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/835,623

Applicant(s)

IWASHITA, HIDETOSHI

Examiner

Qamrun Nahar

Art Unit

2124

-- Th MAILING DATE of this communication appears on th cover sh et with th corr spond nce address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |                                                                                                                                        |                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3</u> . | 6) <input type="checkbox"/> Other: _____                                                |

### DETAILED ACTION

1. Claims 1-10 have been examined.

#### *Drawings*

2. Figures 1A, 1B, 2A, 2B, 3A and 3B should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

#### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by A. Griewank, D. Juedes, J. Utke, “Algorithm 755: ADOL-C: A Package for the Automatic Differentiation of Algorithms Written in C/C++”, hereinafter (“Griewank”).

#### **Per Claim 1:**

The Griewank publication discloses:

- a compiler system for compiling a first program into a second program (“To compile a C++ program that involves variables of type adouble or adoublev, one must add the directive

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#include “adouble.h” at the beginning of the program file. Programs that call on the various derivative evaluation routines must include the header adutils.h. For linking the resulting object codes, the options pointing to these header files and the library libad.a must be used.” on pg. 156, par. 4, lines 1-6)

- **a converter converting a part of the first program into a procedure call and generating the second program (“adouble\* x = new adouble[n]; ... // or: adoublev x(n);” on pg. 158, 7.1 Product Example, see example code, line 10)**

- **a generator generating a code describing a definition of a procedure to be called by the procedure call; and an outputting unit outputting the second program and the code generated by said generator (on pg. 156, par. 4, lines 1-6).**

**Per Claim 2:**

The Griewank publication discloses:

- **further comprising a detector which detects a predetermined particular pattern from the first program, wherein said converter converts the pattern detected by said detector into a procedure call corresponding to the pattern (on pg. 158, 7.1 Product Example, see example code, line 10).**

**Per Claim 3:**

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The Griewank publication discloses:

- wherein said detector detects a call for calling a built-in procedure from the first program (“adouble power(adouble x, int n) { ... } ... y = power(x,n);” on pg. 159, 7.2 Scalar Example, see example code, lines 4-20 and on pg. 160, 7.2 Scalar Example, see example code, line 21).

**Per Claim 4:**

The Griewank publication discloses:

- wherein when said detection detects a plurality of identical patterns from the first program, said converter converts the plurality of patterns into a same procedure call (“double\* xp = new double[n]; ... double\* g = new double[n];” on pg. 158, 7.1 Product Example, see example code, line 9 and on pg. 159, 7.1 Product Example, see example code, line 2).

**Per Claims 5-6:**

These are another versions of the claimed compiler system discussed above (claims 1 and 4), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also anticipated by Griewank.

**Per Claim 7:**

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This is another version of the claimed compiler system discussed above, claim 5, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above.

Thus, accordingly, this claim is also anticipated by Griewank.

**Per Claim 8:**

This is another version of the claimed compiler system discussed above, claim 1, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above.

Thus, accordingly, this claim is also anticipated by Griewank.

**Per Claim 9:**

This is a method version of the claimed compiler system discussed above, claim 1, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, this claim is also anticipated by Griewank.

**Per Claim 10:**

This is a computer-readable storage medium version of the claimed compiler system discussed above, claim 1, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, this claim is also anticipated by Griewank.

***Conclusion***

5. The instant invention describes a feature, “online expanding” for a procedure, where a procedure call in the second program is expanded outside the second program and saved in a

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*separate* file, called "online code", as described by the applicant in the specification, see pg. 13, line 22 to pg. 14, line 10 and see Figure 4. However, claims 1-10 do not clearly recite this feature.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Any inquiry concerning this communication from the examiner should be directed to Qamrun Nahar whose telephone number is (703) 305-7699. The examiner can normally be reached on Mondays through Thursdays from 9:00 AM to 6:30 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki, can be reached on (703) 305-9662. The fax phone number for the organization where this application or processing is assigned is (703) 872-9306.

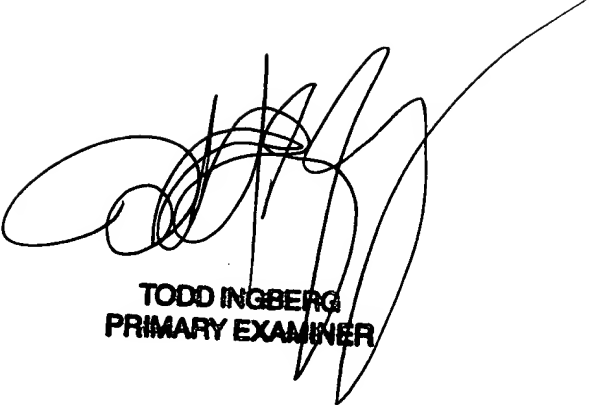
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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April 5, 2004



**TODD INGBERG  
PRIMARY EXAMINER**